

10500076

**AMENDMENTS TO THE SPECIFICATION**

*Pnt*  
Please replace the paragraph beginning on page <sup>2</sup>3, line <sup>29</sup>1 with the following amended paragraph:

(4) Clear solution for compatibility is unavailable, in particular in backup of manufacturer-defined ~~unique~~ special service data.

*Pnt*  
Please replace the paragraph beginning on page 3, line <sup>6</sup>8 with the following amended paragraph:

To attain said object, a method for backup of HLR according to the present invention comprises: configuring a ~~universal~~ common HLR as a disaster recovery center HLR which is used to backup multiple HLRs, then establishing network connections between each operating active HLR and said disaster recovery center HLR, and then loading subscriber data of each active HLR to said disaster recovery center HLR through ~~uniform~~ uniform-formatted text files which describe standard services of the protocol in a standard format;

*Pnt*  
Please replace the paragraph beginning on page 3, line <sup>21</sup>23 with the following amended paragraph:

recovering the data of said active HLR by said disaster recovery center HLR through ~~uniform~~ uniform-formatted text files after said active HLR recovers, redirecting the signaling to said active HLR from said disaster recovery center HLR through modifying route configuration of the corresponding service switching point after the data of said active HLR and disaster recovery center HLR is consistent.

*Pnt*  
Please replace the paragraph beginning on page <sup>3</sup>4, line <sup>28</sup>2 with the following amended paragraph:

With above solution, a ~~universal~~ common HLR can make subscriber data backup for multiple operating active HLRs in the network, and data synchronization through ~~uniform~~ uniform-formatted text files can be implemented, so that it is easy to realize compatible service backup between an active HLR and other devices made by different manufacturers. The method has the following advantages:

*Pmt* Please replace the paragraph beginning on page 4, line <sup>9</sup>12 with the following amended paragraph:

(2) Easy implementation and reduced technical complication: The active HLRs need to convert subscriber data into ~~uniform~~ uniform-formatted text files without complicated data communication, all communication work is finished by the disaster recovery center HLR, thus the affect to operating systems is minimized.

*Pmt* Please replace the paragraph beginning on page 4, line <sup>15</sup>18 with the following amended paragraph:

(3) Simplified management: The HLRs only store and process the home subscriber data and do not affect the traditional management mode; disaster recovery center stores subscriber data of multiple active HLRs, but the subscriber data has been converted into ~~uniform~~ uniform-formatted format, which centralizes the management of all maintenance work, thus the total management cost of the disaster recovery system is reduced.

*Pmt* Please replace the paragraph beginning on page 4, line <sup>22</sup>26 with the following amended paragraph:

(4) Easy backup of unique special service data of HLRs, enhanced availability of the data of the disaster recovery center; and employing standard text files for subscriber data simplifies interface and enhances compatibility.

*Pmt* Please replace the paragraph beginning on page 5, line ~~13~~<sup>8</sup> with the following amended paragraph:

As shown in Fig. 1, the method for backup of HLR according to the present invention is as follows: configuring a disaster recovery center HLR, i.e., configure a ~~universal~~ common HLR as a disaster recovery center HLR which is used to backup multiple HLRs, keeping the external interface and the mechanism of the internal software and hardware of the disaster recovery center HLR unchanged; then establishing network connections between each operating active HLR and the disaster recovery center HLR, loading subscriber data of each active HLR to the disaster recovery center HLR through ~~uniform~~ uniform-formatted text files which describe standard services of the protocol in a standard format;

*Pmt* Please replace the paragraph beginning on page ~~6~~<sup>5</sup>, line ~~8~~<sup>26</sup> with the following amended paragraph:

Next, determining whether the active HLR recovers; if so, recovering the data of said active HLR by said disaster recovery center HLR through ~~uniform~~ uniform-formatted text files, redirecting the signaling to said active HLR from said disaster recovery center HLR through modifying route configuration of the corresponding service switching point after the data of said active HLR and disaster recovery center HLR is consistent; otherwise the disaster recovery center HLR will process the signaling.

*Pmt* Please replace the paragraph beginning on page 6, line ~~14~~<sup>7</sup> with the following amended paragraph:

In the embodiment, each of the ~~uniform~~ uniform-formatted text files may contain a special field for recording the ~~unique~~ special service in the internal format of the corresponding active HLRs. Wherein, standard services of the protocol will be described in the standard format; ~~unique~~ special service data of the active HLRs will be written into the special fields to record ~~unique~~ special service data outputted from the active HLRs in the internal format of corresponding active

HLRs; During parsing the data of the active HLRs, it is enough to store transparently; accordingly, during the data recovery after the active HLRs recovers, the disaster recovery center HLR export the data to the active HLRs transparently, and the active HLRs will parse them on their own.

*Part* Please replace the paragraph beginning on page 6, line <sup>20</sup>~~28~~ with the following amended paragraph:

To enhance security further, each disaster recovery center HLR and each operating active HLR may be configured with a communication device responsible for external communication, respectively; said communication device may be a common PC (personal computer) server. The communication device of each active HLR is designed to convert varied subscriber data into ~~uniform~~ uniform-formatted text files and store said files under the specified directory of each active HLR; the communication device of the disaster recover center HLR is designed to record IP (Internet Protocol) addresses of said active HLRs through configuration files and obtaining said files of varied subscriber data from said specified directory periodically.

*Part* Please replace the paragraph beginning on page 7, line <sup>4</sup>~~12~~ with the following amended paragraph:

To enhance transmission efficiency, said ~~uniform~~ uniform-formatted text files may be stored in fixed length and transmitted between the disaster recovery center HLR and the active HLRs through FTP (File Transfer Protocol); when filling up a file, the information can be stored in a newly-established file; the disaster recovery center HLR abstracts said files and then deletes them automatically.

*Part* Please replace the paragraph beginning on page 7, line <sup>11</sup>~~19~~ with the following amended paragraph:

During normal operation, synchronizing the varied data of the active HLRs to the disaster recovery center HLR can be implemented by transferring varied subscriber data with the format of ~~uniform~~ uniform-formatted text file.

*PA*  
Please replace the paragraph beginning on page 7, line <sup>15</sup>~~23~~ with the following amended paragraph:

There are usually 3 standard methods to modify route configuration of corresponding STPs (Service Switching Point) to realize the redirection of the signaling: modifying the GT (Global Title) translation table; configuring active/backup routes, and configuring the backup subsystem. Through one of said configuration methods, manual and auto switching of signaling can be achieved. For any HLR that plays a very important role in the mobile network, care should be taken before the route configuration of the corresponding service switching point is modified. Auto and manual switching of signaling may be achieved through a ~~unique~~ special configuration method; however, manual mode is proposed to prevent switching by mistake, i.e., manual signaling switching is performed after a fault is confirmed.